THE INFLUENCE OF GEOGRAPHY AND ITS INFORMATION MANAGEMENT SYSTEM ON TOURISM PLANNING: MEDIATING ROLE OF INSTITUTIONAL FACTOR

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ABSTRACT
The aim linked with the ongoing article is to examine the influence of geography, information management system (IMS), and application of geographic information system on tourism planning in Pakistan. The goals of the ongoing research also include the investigation of the mediating impact of an institutional factor among the nexus of geography, IMS, application of geographic information system, and tourism planning in Pakistan. The method that has been adopted for data collection is quantitative and survey questionnaires have been used to collect the data while smart-PLS has been executed for analysis. The results revealed that all the predictors such as geography, IMS, and application of geographic information system have a positive association with tourism planning in Pakistan. The results also exposed that institutional factor are positively mediating among the nexus of geography, IMS, application of geographic information system, and tourism planning in Pakistan. These findings are suitable for the policymakers who develop the policies related to the tourism and geographical planning in the country that they should enhance their focus on IMS its application that could improve the tourism in the country.

INTRODUCTION
Geographers have a strong tradition in tourist preparation and growth. The geographers, renowned for his contributions to the theory of central locations, made early attempts to research systematic space organization and tourism creation. This direction on an overall basis is close to the conceptualization of the model Tourist Area Period of Development and has strong ties to resource conservation and scheduled problems. Both growth and preparation of tourist geographies have a strong history of study with

consequences for the recognition and perception of tourism effects, management, and public policy; most recently, economic development and tourism resilience. However, concepts of tourism creation and planning are subject to numerous philosophical structures and viewed differently and change with time their academic significance and social relevance in the study are unequivocal. Tourism is commonly seen as a social and economic problem, demanding constructive steps to maintain sustainable growth routes. The gap between growth and progress in tourism studies has been well known. It can be simplified using the United States Local Government Commission's distinction that "growth means growing, development means improve – quality increase and development" o.

Thus, while growth is commonly seen as a quantitative measure, the philosophy of sustainability relies more on qualitative aspects of social and economic processes such as life satisfaction and well-being. Furthermore, creation has two related meanings: development as a functional content method and a speech, all of which affect the path, the impacts, and the preparation of tourism problems in destination contexts. Planning is a somewhat vague and challenging term to describe. Planning, in general, is a forward-looking and systematic decision-making mechanism aimed at directing human activities in the optimal mutually decided path (s). For example, describes tourism planning as 'anticipating and controlling improvements to a framework for promoting orderly growth to maximize the social, economic and environmental benefits of the development phase (Riguccio, Tomaselli, Carullo, Verde, & Russo, 2017). Public tourism preparation should also be interpreted as a possible method for leading tourism in a growth direction that offers incentives and well-being within its main activities and business. Having said that the concentration on broader socio-economic growth in tourism is not an inevitable premise or effect because public planning interventions will cause unintended results, often rather industrially based. The studies described four methods to tourism preparation, namely industry-orientated 'boosterish' through which tourism development is unquestionably encouraged. Also acknowledged an alternative tradition of sustainable tourism planning, which explicitly seeks to encourage a comprehensive and progressive strategy and the incorporation of fiscal, social, and environmental principles into tourism growth. In the recent growth of new public administration and the neo-liberal movement, public-private partnerships have increased in tourism planning, and creation and more formal public planning methods have emerged that are hardly distinct from the private sector approaches. However, after more than 30 years of research into a variety of initiatives and measures to manage tense between tourism growth and development, tourism appears far from sustainable (Nepal, 2008; Riguccio et al., 2017).

The geography of any country plays a vital role in the prosperity of the country. The geographical developments also enhance the differences between the developed and the developing countries. The developed countries focus a lot on their geographical development. Pakistan being a developing country also focus on its geographical development. One of the evidence is the China Pakistan Economic Corridor. The world is witness that this corridor is a game-changer for Pakistan. There are many geographical developments aligned with this project. One of the core factors of any country geographical development is the population of that country. The countries which failed to work on their geographical development by ignoring their population intensity are also failed to progress in the world. As the population of the country also influences the multiple sectors like tourism etc.

The tourism sector is fast growing and is one of the most significant and dynamic contributors to socio-economic development. Tourism is a valuable contribution to the global problem with its large social, cultural, political and economic effects. Tourism investments have risen from destinations worldwide, as tourism is a vital driver for local and regional growth and prosperity for a significant part of the population (Nawaz & Hassan, 2016a). It leads to employment growth and the productivity of businesses that have a direct positive effect on a country's economy. Tourism prices are the third largest export region after chemicals and fuels and ahead of automobile and food items. As the tourism industry is a significant segment of the global economy, a vast range of destinations competes for prospective visitors by all forms of contact. As ICT has changed the tourism industry internationally, tourism organizations can use it and use the variety of new opportunities through creative technical resources to improve it (Bramwell & Lane, 2011; Nawaz, Azam, & Bhatti, 2019). In the last decade, online apps have revolutionized the tourism industry, empowering future tourists to interact and view knowledge and to engage in holiday planning. Since we live in a digitized world, the Internet has played a crucial role in the tourism industry as a fast-rising instrument of foreign communication. In an organization, there are various considerations. The structural considerations play an essential role in deciding the course of the organization. The institution combines both considerations. In the same way, the tourism department manages a country's tourism sector. The structural variables of the tourism department play a key role in preparing the tourism strategy of the country. The studies suggested that the institutional facts of tourism are correlated with the method of tourism planning. In literature, the institutional influences function several times as moderators or mediators for other associated factors (MacKinnon, Cumbers, Pike, Birch, & McMaster, 2009; Xu, Zhang, & Lew, 2014).

Figure 1 shows Province-wise headcount ratio with rural-urban disaggregation. In the province of Baluchistan, the population share during the year 2012-13 was 5.09. The poverty headcount ratio (H) in the year of 2012-13 was 62.62, the ratio in the year of 2010 to 2011 was 67.12 and in the year of 2008 to 2009 was 70.32. Then, the contribution to headcount ratio was 10.22 percentage if the year 2012 to 2013. The change in the ratio from the year 2008 to 2009 and then from the year 2012 to 2013 was divided into two parts; one was absolute, and the next was percentage. In absolute, the value was -7.7, and in the percentage, it was -10.98.

In the province of KP, the population share during the year of 2012-13 was 14.19. The poverty headcount ratio (H) in the year 2012-13 was 39.32, the ratio in the year of 2010 to 2011 was 45.52 and in the year of 2008 to 2009 was 48.52. Then, the contribution to the headcount ratio was 17.82 percentage if the year 2012 to 2013. The change in the ratio from the year 2008 to 2009 and then from the year 2012 to 2013 was divided into two parts; one was absolute, and the next was p percentage. In absolute, the value was -9.2, and in the percentage, it was -18.98.

In the province of Punjab, the population share during the year 2012-13 was 57.4. The poverty headcount ratio(H) in the year 2012-13 was 24.32, the ratio in the year of 2010 to 2011 was 27.62 and in the year of 2008 to 2009 was 30.12. Then, the contribution to the headcount ratio was 44.52 percentage if the year 2012 to 2013. The change in the ratio from the year 2008 to 2009 and then from the year 2012 to 2013 was divided into

two parts; one was absolute, and the next was percentage. In absolute, the value was -5.8, and in the percentage, it was -19.28.

In the province of Sindh, the population share during the year of 2012-13 was 23.35. The poverty headcount ratio (H) in the year of 2012-13 was 37.52, the ratio in the year of 2010 to 2011 was 37.42 and in the year of 2008 to 2009 was 39.42. Then, the contribution to the headcount ratio was 28.02 percentage if the year 2012 to 2013. The change in the ratio from the year 2008 to 2009 and then from the year 2012 to 2013 was divided into two parts; one was absolute, and the next was percentage. In absolute, the value was -1.9, and in the percentage, it was -4.78. This uneven distribution of population may affect the tourism planning in the country. These highlights regarding the population of Pakistan in the past as well as projected is as under:

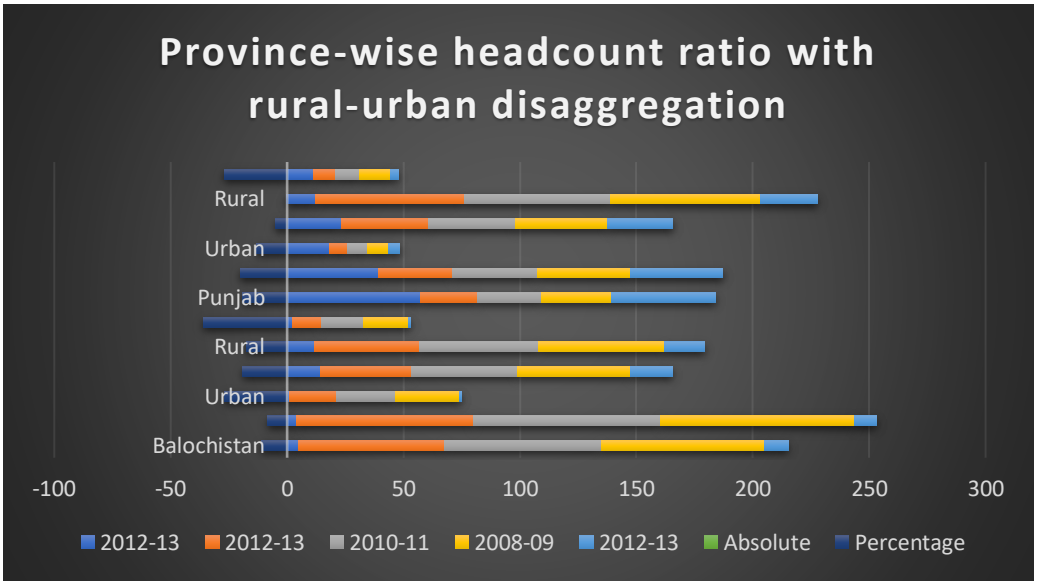

Figure 1: Population Distribution of Pakistan

Figure 2 shows the Bottom/5th quintile of districts over Poverty Headcount Ratio. In the year of 2012-13, the population share and Headcount share of Kohlu was 0.12 and 96.41. The value in the year of 2010-11and 2008-2009 of headcount ratio is 95.21, 93.21, and the change from 2008-9 and 20012-13 was 3.2 in absolute and 3.4 in percentage. In the year of 2012-13, the population share, and Headcount share of Kohistan was 0.39 and 96.21. The value in the year of 2010-11and 2008-2009 of headcount ratio is 93.51, 95.41 bands the change from 2008-9 and 20012-13 was 0.8 in absolute and 0.8 in percentage. In the year of 2012-13, the population share and Headcount share of Torgarh was 0.16 and 89.11. The value in the year of 2010-11and 2008-2009 of headcount ratio is zero, 0, and the change from 2008-9 and 20012-13 was 0 in absolute and 0 in percentage. In the year of 2012-13, the population share and Headcount share of Panjgur was 0.21 and 87 5 1. The value in the year of 2010-11and 2008-2009 of headcount ratio is 87.51, 68.61 and the change from 2008-9 and 20012-13 was 18.9 in absolute and 27.6 in percentage. In the year of 2012-13, the population share and Headcount share of Sherani, was 0.07 and 87.11. The value in the year of 2010-11and 2008-2009 of headcount ratio is 82.91, 0 and the change from 2008-9 and 20012-13 was 4.2 in absolute and 5.1 in percentage. These poverty conditions may

affect the tourism planning in the country and the present study examine the tourism planning under the geographical factors of Pakistan.

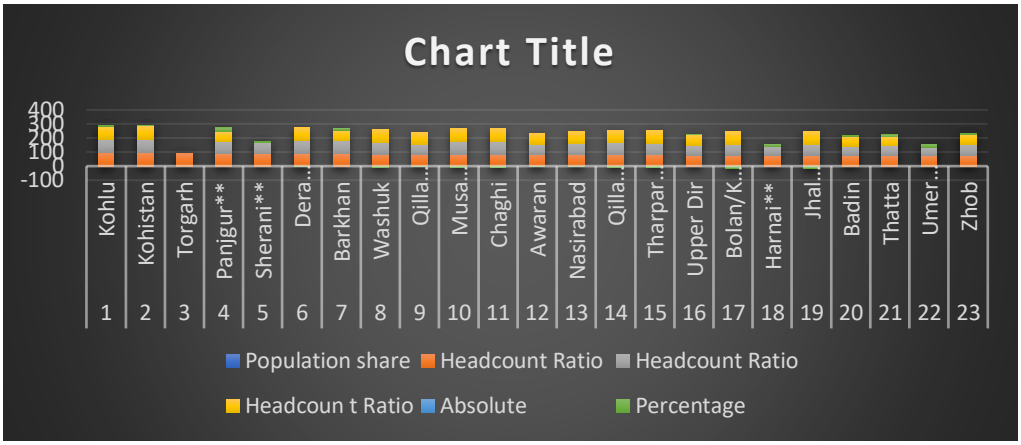

Figure 1: Poverty Headcount Ratio in Pakistan

LITERATURE REVIEW

The spread of modern IT technology provides new possibilities to grow tourism operations in a competitive and fluid market and to target potential customers. Ecommerce is one of the most significant technical applications for selling and buying products through the Internet. According to the digitalization of all tourism processes and value, chains enable organizations, including e-marketing e-commerce and re-financing e counting and e-HRM operations, to optimize their performance. ICT has transformed contemporary global markets, helping businesses to meet a global audience, export and increase internal production of a wider variety of products and services (Garcia-Ayllon, 2016). In addition, ICT has undertaken electronic business transactions and profoundly changed the conventional understanding of advertisement, shopping and retail media CT had a great effect on converting small firms into multinational corporations, strengthening their marketplace, achieving a strategic edge, growing competitiveness, and facilitating innovative management approaches. To ensure sustainable foreign tourism growth, to promote less developed and remote areas as well as the cultural resources of each region, tourism organizations need to focus further on those applications. Keeping in mind that the current generation of visitors and tourism workers is very different from the previous generations and the key difference is technology, innovations must be embraced by tourist destinations as they deliver good quality goods and services that lead to enhancing the reputation and the branding of destinations (Gobinath, Bhaskaran, & Chandrasekar, 2017).

To maintain their long-term success, tourism companies must follow a series of principles characterizing the modern generation of visitors. Increasing effectiveness at both the microeconomic (tourism company/organization) as well as the macroeconomic level is leading to the promotion, sales, delivery, and enhancement of customer support (tourism destination). Tourism web services allow providers to provide mass customization services, interactive product design and details. In addition, they evaluate competitive destinations and visitor grievances, estimate tourist demand, and include comparative details on tourism. E-business apps allow providers to develop, connect report, provide value to consumers, and reduce the barriers of history, geography, politics and connectivity. The advances and effects of emerging technology have revolutionized travel, restructured management procedures, reservations, call center

and interfaces such as the Internet and Booking Engines (Albuquerque, Costa, & Martins, 2018; Nofrizal & Prawira).

Numerous factors exist in an institution. Theses Institutional factors play a vital role to decide the direction of the institution. The institution is the combination of these factors. Similarly, the tourism department controls the tourism sector of any country. The tourism department institutional factors play a vital role while planning for the tourism policy of the country (Kurt & Kurdoglu, 2016; Mukherjee & Mukherjee). The studies proposed that there is an association between institutional tourism facts and the tourism planning procedure. In literature, numerous time the institutional factors act as a moderator or the mediator with another corresponding number of factors.

Constant technical advancement has an intangible beneficial indirect effect on the financial results and viability of an enterprise. It enables it to sell differentiated, professional and benefit goods to remain competitive on tourism markets. Implementing ICT has a high positive success potential, as it is the instrument used to coordinate contacts easily and cost-effectively through companies, stakeholders, and end-users. The introduction and usage of IT in tourism is recognized as the guiding force of creativity that leads to strong market competitiveness. The investment in tourism service providers depends on the way the services provided fulfil the need for diversity and increase the distinction of tourism goods to satisfy a wide variety of specific demands such that more consumers are drawn. In recent years, emerging innovations have evolved continuously and transformed the tourism market, helping to replace mediators and implement new ways of mediation (Booyens & Rogerson, 2016; Kantola, Uusitalo, Nivala, & Tuulentie, 2018). The willingness to implement scalable, productive systems and leverage disruptive approaches through knowledge and communications technologies is a crucial factor in the success and efficiency of small and medium-sized tourism companies in a worldwide climate. In the last decade, the continuing growth of ICTs has transformed the travel industry and consumer behavior. Both sides of the service providers and tourism industry travelers accepted online applications. To meet demand, innovative approaches are being created that would make it simple for consumers to select when they have access to a wide variety of knowledge and deals, easier/faster service and the connection they will experience with tourists, can even compare amongst many tourist suppliers and eventually choose and purchase the fascinating product online, through a direct service book (Tayfun et al., 2018). The advantages are quicker and simplified tourism development for firms, connection to a larger sector, knowing customer desires, improving their tourism facilities, brands, and brand, building trust in their clients, greater resource sharing and exchange between businesses and stakeholders. It also allows the destinations (places and culture) to be illuminated and established globally and not rely on tour operators any longer The ICT revolution provides a wide variety of options, including tourism, tourism, transport, recreation, hospitality and raises the degree of productivity in tourism economic processes (Barrera Ortiz & Varela Villalba, 2017; Bonzanigo, Giupponi, & Balbi, 2016).

Geographic Information System (GIS) is a recent revolutionary technology that has a range of uses in tourism, both in the tourist enterprise and in tourist management. Many businesses have implemented GIS on their consumers' websites to enable them to schedule their vacations and manage through their travels. The usage by Greek tourist companies and tour operators of emerging technology including Geographic

Information System (GIS) allows them to obtain, manage and store information to handle and provide information to sustain and improve the efficacy and reliability of everyday business processes and functions (Chanegriha, Stewart, & Tsoukis, 2017; Garcia-Ayllon, 2016; Yin, Lin, & Prideaux, 2019). The GIS facilitates the establishment of alliances and networks between tourism operators to support tourist organizations and destinations, to achieve economies of scale and to modernize and deliver enhancements of quality and diversification of the current tourism goods and services. It also improves the exposure, marketing, and global delivery of the tourism commodity at a low rate, largely liberating dependency on travel agencies abroad for corporations. The geographic information system provides perfect forums for tourism information convergence and interpretation of geographic details. It provides opportunities for visitors and tourism officials alike. It presents knowledge and geographical situational functions for travelers through interactive maps with audiovisual equipment such as a transport database, highways, trains, resources (e.g. restaurants, hotels, medical facilities etc.) (i.e., cultural, beaches, museums etc.). Such geographic systems increase the attractiveness of the destinations as Tanjung Tinggi Beach has the highest tourist attraction value and Tanjung Binga beach (Astuti, Sİ, Si, & MAULİDA, 2018). In addition, it helps you to choose the direction of the "shortest distance," the "fastest route," to inform regarding geographic conditions, humidity, altitude, locally populated, images, web pages for a business, etc. It allows visitors to improve their experience and provides knowledge about their trip by selecting a geographic region based on geographical factors such as proximity, distance, place, etc. At the same period, private and public authorities are in control of real-time knowledge, as this framework serves as a database for spaces and data processing, new site planning, sustainability metrics for a tourism product and the impacts of tourism growth (Booyens & Rogerson, 2016; Meekes, Buda, & de Roo, 2017; Nawaz & Hassan, 2016b). The ArcGIS dashboard is intended to show a view of much geographical data, which lets a user track events and activities on a single screen. It provides an exhaustive view of the data that may be shared or taken into consideration, guarantees that both employees work on the same task by visualizing and utilizing the same data and provides a tailored view of a wider range of data. It consists of tables, measurements, maps and other graphic elements that represent individuals, programs, objects or events' state and results so that anyone can easily imagine and appreciate the impacts of design decisions in real-time. These systems can be used to create awareness among the tourists about the expo events to ensure their participation (Tayfun et al., 2018). When the consumer installs, changes, and deletes functions, this dashboard continuously updates and offers instant input on the effect of design choices about accidents, events and other operations. It may even be communicated with anyone or just with individuals in an organization (Adli & Lestari, 2017; Fesenmaier, Xiang, Pan, & Law, 2010). The ArcGIS Survey 123 method is a mobile computer framework built into the Geographical Information System network that is compliant with other mobile GIS apps. This application helps anyone to create a questionnaire for the consumer in a simplified friendly environment where the client can complete when he or she leaves the website via cell phones or tablets. Data is forwarded directly for review and retrieval of findings to a secure GIS environment. Data obtained by a company by its clients allow them to draw valuable conclusions such as demographic measurement, happiness, inspiration, behavior, and the anticipated benefits. This application's capacity to gather geospatial knowledge through the analysis, along with the flexibility of the questionnaire layout, shipping directly to the geodatabase and presentation of

findings in maps, adds importance in decision-making processes. Mobile applications have changed the tourism to a great extent (Arslantürk & Özkan, 2018).

The ArcGIS Tale Map technology is a creative medium that attracts readers across history through the visual design of mixed media charts. This application introduces integrated maps in an entertaining, narrative, and natural manner, providing new ways to communicate unique subjects in which the geographic aspect plays a key role. Each map is displayed in stages or frames with a quick description. Story Map provides a digital map that may include photos, videos, narrative text, positions and geospatial data names, popups, multimedia illustrations, graphs, analytics, and statistic instruments that can provide the consumer with additional knowledge on a subject or area. It is an understandable platform for public engagement since it provides geospatial knowledge for users with no GIS background for communicating a destination or an event. Story Chart is an effective way to connect, publicize and advertise tourism goods and attractions to the public (Nepal, 2008; Tukhliev & Muhamadiyev, 2019).

The maps in a narrative structure are built to be appealing, simple to use, accessible to any future consumer to improve customer loyalty and meet modern tourism demands. 1.10 Opinion Research now the rise of online shopping, social networking, Wikipedia, and journals have contributed to an immense volume of knowledge that people use to create their own decisions. The process of vast volumes of data has become very complicated and big data techniques, such as sentiment analysis, must be established which could be an effective instrument in tourism, where consumer engagement is key to development and popularity. Feel-analysis includes the retrieval from internet outlets of thoughts, views, beliefs, emotions, expectations, and characteristics of individuals. It dictates whether the document is optimistic, negative, or neutral. Sentiment analysis involves a multi-stage process: (a) data recruiting, (b) data recovery and collection, (c) pre-processing data, (d) attribute extraction, (e) subject identification and (f) data mining. Data mining is used to evaluate large volumes of data to find trends through processing data. These applications allow businesses to forecast emerging developments, execute an effective marketing platform to satisfy consumer needs, increase service quality and improve customer relationships (Nepal, 2008; Tukhliev & Muhamadiyev, 2019). Based on this literature, the following hypotheses have been developed:

H1: Geography positively associated with tourism planning in Pakistan.
H2: Information management system positively associated with tourism planning in Pakistan.
H3: Application of geography information management system positively associated with tourism planning in Pakistan.
H4: Institutional factors acts a mediator on the relationship between geography positively associated with tourism planning.
H5: Institutional factors acts a mediator on the relationship between information management systems positively associated with tourism planning.
H6: Institutional Factors acts a mediator on the relationship between applications of geography information management system positively associated with tourism planning.

RESEARCH METHODS

The purpose of the article is to investigate the influence of geography, IMS, and application of geographic information system on tourism planning along with the investigation of mediating impact of an institutional factor among the nexus of geography, IMS, application of geographic information system and tourism planning in Pakistan. The method that has been adopted for data collection is quantitative, and survey questionnaires have been used to collect the data. Simple random sampling has been used to select the respondents. The geographical and tourism managing authorities are the respondents to whom surveys have been sent by personal visit. A total of 420 questionnaires have been sent, but out of them, only 290 were returned that represented around 69.05 per cent. The smart-PLS has been executed for analysis due to the complex model has been executed by the study, along with the nature of the study is hypotheses testing (Hair, Ringle, & Sarstedt, 2016).

The variables that have been adopted by the study include three predictors such as geography (GGY) that has six items, information management system (IMS) that has three items and application of geographic information system (AGIS) that has seven items. In addition, institutional factors (IF) have been used as a mediator that has four items and tourism planning (TP) has been used as a dependent variable that has five items. These variables have been shown in Figure 3.

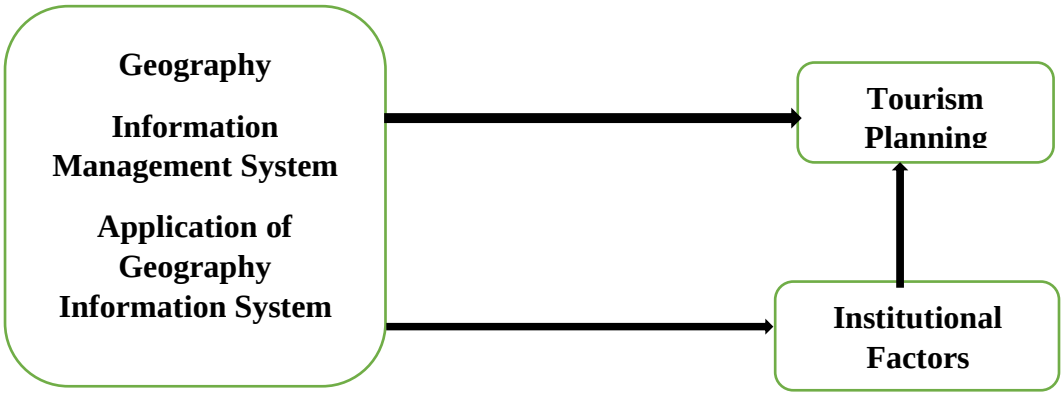

Figure 3: Theoretical Model

Findings

The results exposed the convergent validity in its first part that is about the links among the items. The figures highlighted that loadings and AVE are higher than 0.50, and Alpha and CR values are bigger than 0.70, which is an indication of high links among items and valid convergent validity. These values have been highlighted in Table 1.

Table 1: Convergent Validity

Constructs	Items	Loadings	Alpha	CR	AVE
Application of Geography Information System	AGIS1	0.739	0.867	0.897	0.555
	AGIS2	0.697			
	AGIS3	0.699			
	AGIS4	0.762			
	AGIS5	0.751			
	AGIS6	0.795			
	AGIS7	0.768			
Geography	GGY1	0.779	0.838	0.884	0.603
	GGY2	0.779			
	GGY3	0.795			
	GGY4	0.733			
	GGY6	0.795			
Institutional Factor	IF1	0.763	0.802	0.870	0.625
	IF2	0.812			
	IF3	0.783			
	IF4	0.805			
Information Management System	IMS1	0.638	0.746	0.811	0.592
	IMS2	0.854			
	IMS3	0.800			
Tourism Planning	TP1	0.735	0.798	0.868	0.623
	TP3	0.746			
	TP4	0.842			
	TP5	0.828			

The results also exposed the discriminant validity in its next part that is about the links among the variables. The figures highlighted that the values of the Heterotrait Monotrait (HTMT) ratio are lower than 0.90, which is an indication of low links among variables and valid discriminant validity. These values have been highlighted in Table 2.

Table 2: Discriminant Validity

	AGIS	GGY	IF	IMS	TP
AGIS					
GGY	0.607				
IF	0.611	0.730			
IMS	0.244	0.277	0.430		
TP	0.708	0.762	0.771	0.344	

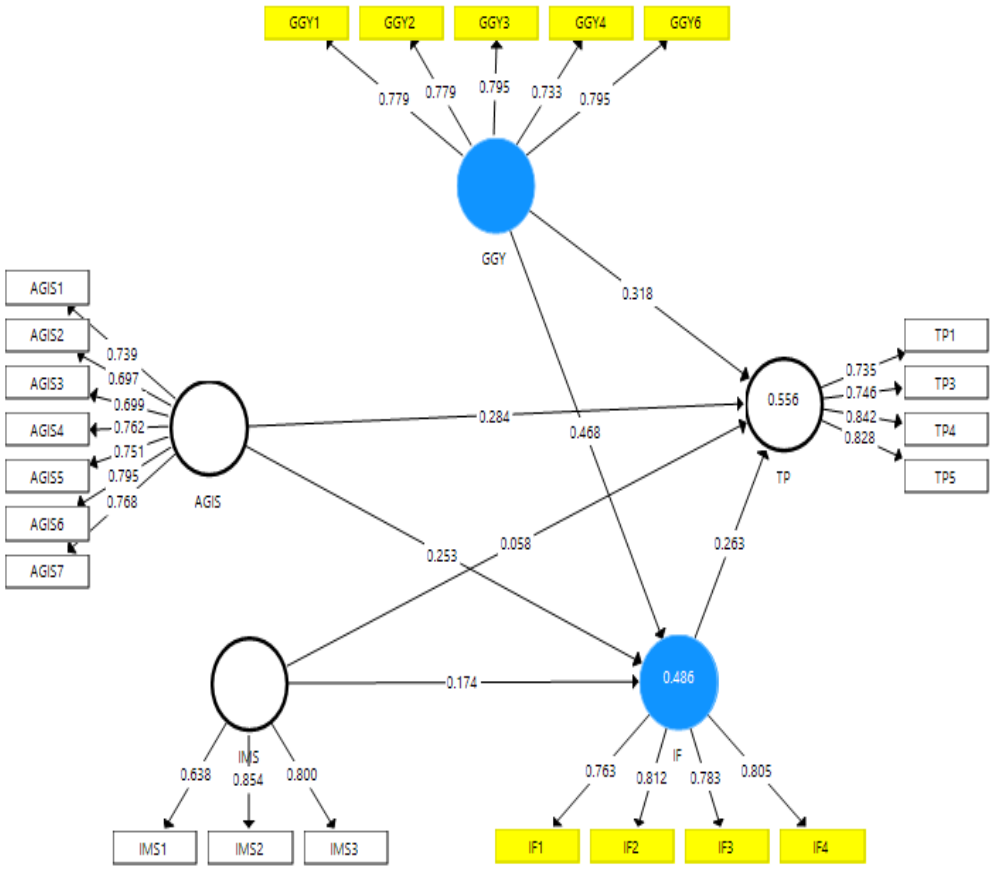

Figure 4: Measurement Model Assessment

The hypotheses testing has been executed in the path analysis section of the results, and the figures revealed that all the predictors such as geography, IMS, and application of geographic information system have a positive association with tourism planning in Pakistan and accept H1, H2, and H3. In addition, the results also exposed that institutional factor are positively mediating among the nexus of geography, IMS, application of geographic information system, and tourism planning in Pakistan and accept H4, H5 and H6. These figures are highlighted in Table 3.

Table 3: A Path Analysis

Relationships	Beta	S.D.	t-statistics	p-values	L.L.	U.L.
AGIS -> IF	0.253	0.050	5.058	0.000	0.173	0.372
AGIS -> TP	0.284	0.041	6.883	0.000	0.199	0.358
GGY -> IF	0.468	0.045	10.345	0.000	0.360	0.530
GGY -> TP	0.318	0.043	7.449	0.000	0.245	0.413
IF -> TP	0.263	0.048	5.446	0.000	0.174	0.350
IMS -> IF	0.174	0.041	4.274	0.000	0.083	0.238
IMS -> TP	0.058	0.035	1.649	0.049	0.006	0.121
AGIS -> IF -> TP	0.067	0.018	3.672	0.000	0.035	0.104
GGY -> IF -> TP	0.123	0.027	4.566	0.000	0.073	0.168
IMS -> IF -> TP	0.046	0.014	3.353	0.001	0.020	0.066

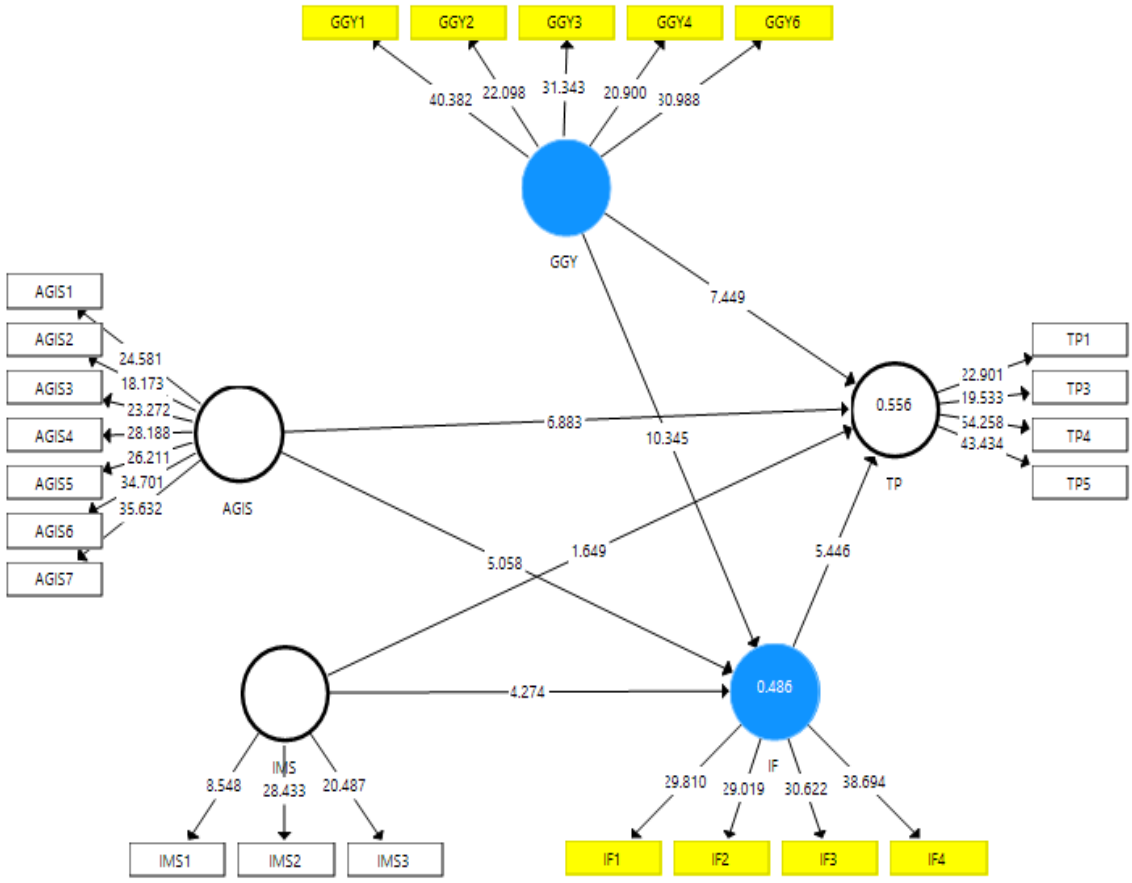

Figure 5: Structural Model Assessment

DISCUSSION AND IMPLICATIONS

The results of this study have revealed that Geography has a positive relationship with tourism planning in Pakistan. These results are in line with the past studies of Brouder (2014) which show the considerable contribution of the knowledge of earth, an association of human beings in the society, and the features of their environment prove to be helpful in tourism planning. The findings of the current study have also revealed that the efficient information management system has a positive association with tourism planning in Pakistan. These findings agree with those of past studies of Navío-Marco, Ruiz-Gómez, and Sevilla-Sevilla (2018) where it has been shown that if the information management system is sound and effective, it puts positive impacts on tourism planning. Moreover, the results of the current article have represented that the application of a geographic information system is positively linked with tourism planning in the context of Pakistan. These results match with the previous studies of Wei (2012) according to which if the geographical information system is being applied effectively and efficiently, the tourism planning can be made in a better way. In addition, the results have indicated that institutional factors play a mediating role between geography and tourism planning in Pakistan. These results are in line with the past studies of Wang and Ap (2013), which also represent that geography positively affects institutional factors which in turn improves tourism planning in Pakistan. The results have also exposed that the institutional factors are a sound mediator between the information management system and tourism planning. The studies approve these results of Fong, Wong, and Hong (2018), which reveal that an effective information

system improves institutional factors, and thereby there is an improvement in tourism planning. Furthermore, the results have indicated that the institutional factors are an appropriate mediator between the application of geographic information systems and tourism planning. These results agree with the results of past studies of Adu-Ampong (2017).

The current study has both theoretical and empirical implications. From the theoretical perspective, it contributes a lot to the literature on tourism management as the current study deals with the three contributors of effective tourism planning such as geography, information management system, and the application of geographic information system. Furthermore, the study adds to the literature in the way it describes the mediating influences on the association between geography, information management system, and application of geographic information system, and tourism planning. As far as an empirical implication of the study is concerned, it proves to be a guideline for the tourism management of how to plan, control, and manage tourism in the country with the help of geography, effective implementation of the practices of the information management system, and the application of geographic information system. These findings are suitable for the policymakers who develop the policies related to the tourism and geographical planning in the country that they should enhance their focus on IMS its application that could improve the tourism in the country. It also implies that with the sound mediator of institutional factors between geography, information management system, and application of geographic information system and tourism planning, tourism business can be grown with rapid speed.

CONCLUSION AND LIMITATIONS

The current study concludes that the association between geography and tourism management is positive as the knowledge of places, links between people, and their environment helps the management in planning tourism. The study examines that information management system is positively linked with tourism planning. The more efficient the information management system, the better is the tourism planning. Moreover, it has been proved by the results that the effective application of information systems makes tourism planning convenient and effective, which results in the growth of the tourism industry. In addition, the study also represents that institutional factor are playing a considerable mediating role between geography, information management system, and application of geographic information system and tourism planning. The better geography, efficient information management system, and consistent application of geographic information system improve the quality of institutional factors, which further improve tourism planning.

The current study has thrown light only on the contribution of geography, information management system, and application of geography information to the planning and management of tourism. While many other factors also prove to be helpful in this regard which should also be discovered by future academics, which would expand the scope of the literature on tourism management. Moreover, only the author of the current study for data collection has used a particular source, while future scholars are recommended to apply multiple sources for the acquisition of data for their study. In addition, this study is about tourism planning in Pakistan and recommended that future studies should add more countries in their analysis.

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